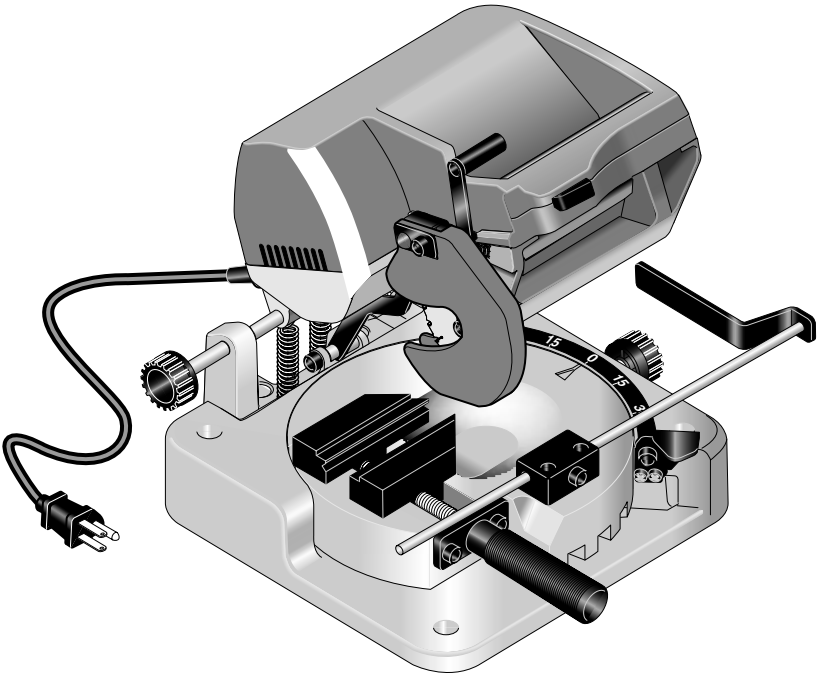
PROXXON

KGS 80 MITER SAW



Manual

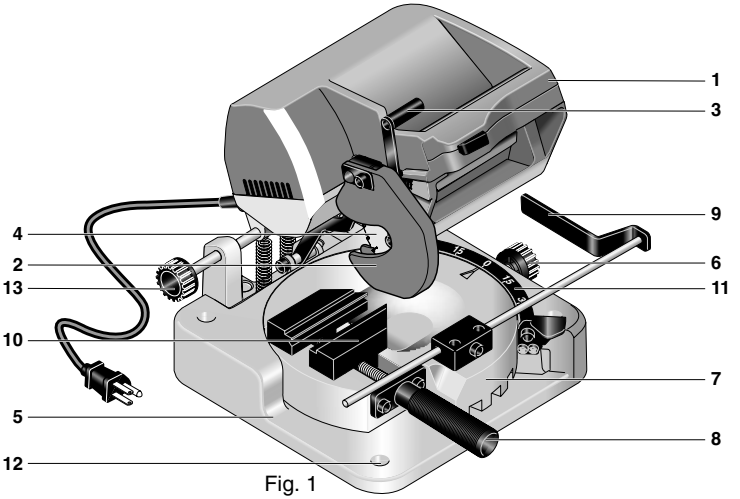


Fig. 1

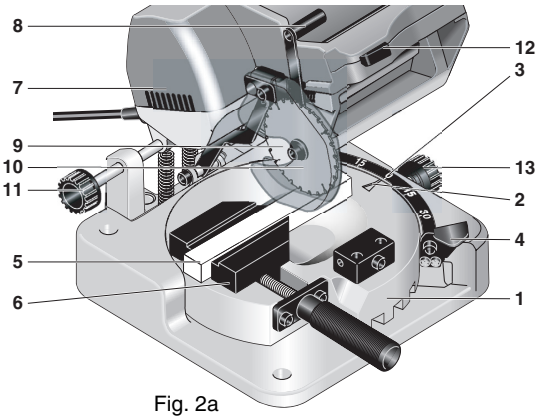


Fig. 2a

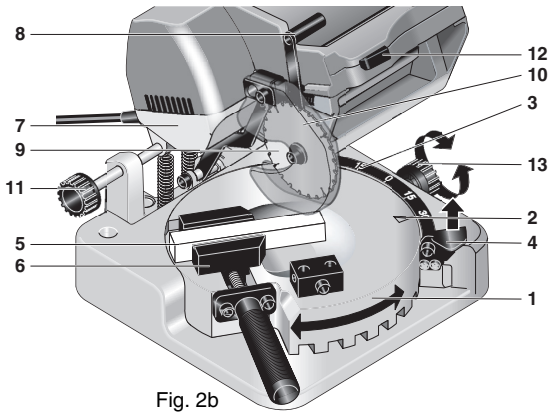


Fig. 2b

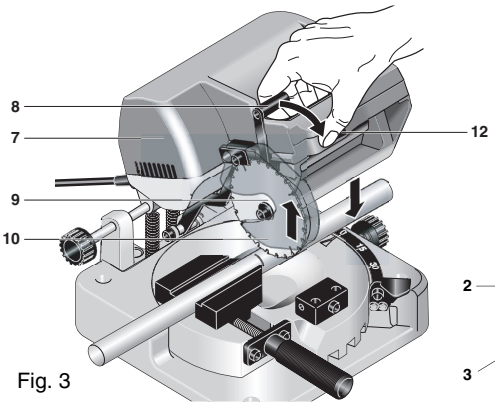


Fig. 3

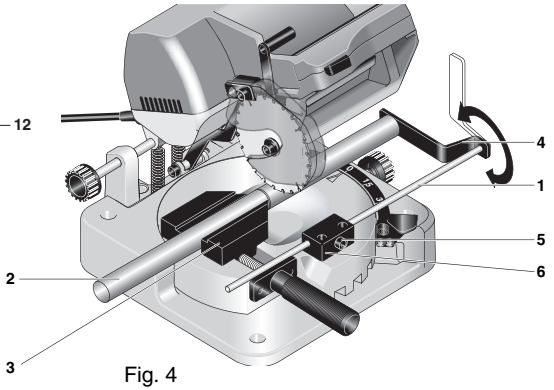


Fig. 4

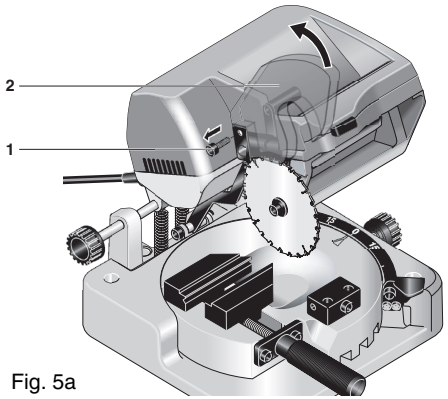


Fig. 5a

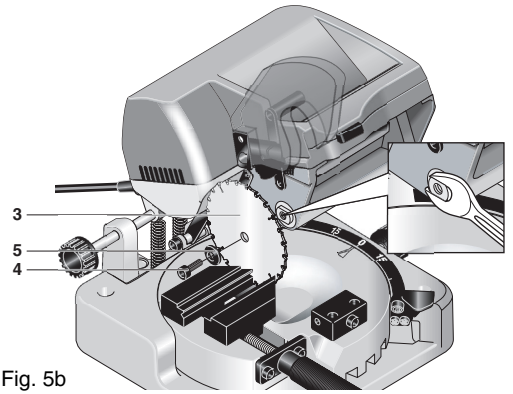


Fig. 5b

Operating instructions

KGS 80 Miter Saw

Contents:

Dear Customer!

Using these instructions

- makes it easier to get familiar with the device
- prevents malfunctions caused by improper handling, and
- lengthens the service life of your device.

Please keep these instructions readily accessible at all times.
Use the device only when you have understood it exactly and always adhere to the instructions.

PROXXON is not liable for the safe functioning of the device in cases of:

- handling that does not conform to the usual usage,
- purposes of use not designated in the instructions,
- disregard of the safety instructions.

You are not entitled to guarantee claims in cases of:
- operator errors,
- inadequate maintenance.

For your own safety, please follow the safety instructions exactly.
Use only genuine PROXXON replacement parts.
We reserve the right to make improvements in the sense of technical progress. We wish you much success with the device.

1 General safety notes

KNOW YOUR POWER TOOL!
Read and understand instruction manual!
Understand your power tool´s application, limitations, and potential hazards.

Warning!
Failure to read all instructions and follow the general safety warnings and other safety

warnings and cautions may result in serious personal injury.

1. KEEP GUARDS IN PLACE and in working order.
2. REMOVE ADJUSTING KEYS AND WRENCHES. Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.
3. KEEP WORK AREA CLEAN. Cluttered areas and benches invite accidents.
4. DON'T USE IN DANGEROUS ENVIRONMENT. Don't use power tools in damp or wet locations, or expose them to rain. Keep work area well lighted.
5. KEEP CHILDREN AWAY. All visitors should be kept safe distance from work area.
6. MAKE WORKSHOP KID PROOF with padlocks, master switches, or by removing starter keys.
7. DON'T FORCE TOOL. It will do the job better and safer at the rate for which it was designed.
8. USE RIGHT TOOL. Don't force tool or attachment to do a job for which it was not designed.
9. USE PROPER EXTENSION CORD. Make sure your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. Table 1 shows the correct size to use depending on cord length and nameplate ampere rating. If in doubt, use the next heavier gage. The smaller the gage number, the heavier the cord.
   Exception No. 1:
   The reference to the table and the table itself may be omitted if a statement indicating the appropriate gage and length is incorporated into the instruction.
   Exception No. 2:
   The information regarding extension cords need not be provided for a permanently connected tool.
10. WEAR PROPER APPAREL. Do not wear loose clothing, gloves, neckties, rings, bracelets, or other jewelry which may get caught in moving parts. Nonslip footwear is recommended. Wear protective hair covering to contain long hair.
    Exception: The reference to gloves may be omitted from the instructions for a grinder.
11. ALWAYS USE SAFETY GLASSES. Also use face or dust mask if cutting operation is dusty. Everyday eyeglasses only have impact resistant lenses, they are NOT safety glasses.
12. SECURE WORK. Use clamps or a vise to hold work when practical. It's safer than using your hand and it frees both hands to operate tool.
13. DON'T OVERREACH. Keep proper footing and balance at all times.
14. MAINTAIN TOOLS WITH CARE. Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
15. DISCONNECT TOOLS before servicing; when changing accessories, such as blades, bits, cutters, and the like.
16. REDUCE THE RISK OF UNINTENTIONAL STARTING. Make sure switch is in off position before plugging in.
17. USE RECOMMENDED ACCESSORIES. Consult the owner's manual for recommended accessories. The use of improper accessories may cause risk of injury to persons.
18. NEVER STAND ON TOOL. Serious injury could occur if the tool is tipped or if the cutting tool is unintentionally contacted.
19. CHECK DAMAGED PARTS. Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function – check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation.
    A guard or other part that is damaged should be properly repaired or replaced.
20. DIRECTION OF FEED. Feed work into a blade or cutter against the direction of rotation of the blade or cutter only.
21. NEVER LEAVE TOOL RUNNING UNATTENDED. TURN POWER OFF. Don't leave tool until it comes to a complete stop.

Table 1:
Minimum gage for cord:

Total length of cord in feet	25 ft	50 ft	100 ft	150 ft
AWG:	18	16	16	14

2 Addditional safety instructions for Miter Saws

a) Wear eye protection.
Projectiles thrown away from the machine could cause serious permanent eye damage. Always wear safety goggles, not glasses, complying with ANSI Z87.1 (or in Canada CSA Z94-3-M88). Everyday eyeglasses have only impact resistant lenses. They are not safety glasses! Safety goggles are available at many local retail stores. Glasses or goggles not in compliance with ANSI or CSA could seriously hurt you when they break.

b) Keep hands out of path of saw blade.
Avoid contact with any coasting blade. It can still cause severe injury.

c) Do not operate saw without guards in place.
Check blade guard for proper closing before each use. Do not operate saw if blade guard does not move freely and close instantly. Never clamp or tie the blade guard into the open position.

d) Do not perform any operation freehand.
The workpiece must be secured firmly against the turn base and guide fence with a vise during all operations. Never use your hand to secure the workpiece. Always use vise!

e) Never reach around saw blade and keep fingers in a safe distance.

f) Turn off tool and wait for saw blade to stop before moving workpiece or changing settings.

g) Disconnect power (or unplug tool as applicable) before changing blade or servicing.
Unplug your scroll saw before changing blades, adjustments, or performing any maintenance.

h) Always remain alert when in the saw is in use. Inattention on the part of the operator may lead to serious injury.

i) Before starting your work always inspect your workpiece
Make sure there are no nails or foreign objects in the part of the work piece to be cut.

j) Check damaged parts and watch the saw while it runs
Before use of the tool, any part that is damaged should be carefully checked to ensure that it will operate properly and perform its intended function. If the saw makes an unfamiliar noise or vibrates excessively, stop immediately; turn the saw off. Unplug the saw! Check for alignment of moving parts, mounting, and any other conditions that may affect its operation. If any part is missing, broken or bent in any way, or any electrical parts don't work properly, turn the saw off and unplug the saw. Do not restart until finding and fixing the problem correctly. All repairs, electrical or mechanical, should be attempted only by trained repairmen.

k) Do not operate machine while under the influence of drugs, alcohol or medicamentation
Never operate a machine when tired, or under the influence of drugs or alcohol or medicamentation. Full mental alertness is required at all times when running a machine.

i) Do not remove jammed cutoff pieces until saw blade has stopped completely.
Before freeing any jammed material or loose pieces from the turn-table of the saw, turn the machine off, wait for all moving parts to stop and unplug the saw!

3 Grounding instructions

In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This tool is equipped with an electric cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into a matching outlet that is properly installed and grounded in accordance with all local codes and ordinances.
Do not modify the plug provided – if it will not fit the outlet, have the proper outlet installed by a qualified electrician.

Improper connection of the equipment-grounding conductor can result in a risk of electric shock. The conductor with insulation having an outer surface that is green with or without yellow stripes is the equipment-grounding conductor. If repair or replacement

of the electric cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal.
Check with a qualified electrician or service personnel, if the grounding instructions are not completely understood, or if in doubt as to whether the tool is properly grounded. Use only 3-wire extension cords that have 3-prong grounding plugs and 3-pole receptacles that accept the tool's plug.
Repair or replace damaged or worn cord immediately.

This tool is intended for use on a circuit that has an outlet that looks like the one illustrated in Sketch A in Figure 6.

The tool has a grounding plug that looks like the plug illustrated in Sketch A in Figure 6. A temporary adapter, which looks like the adapter illustrated in Sketches B and C, may be used to connect this plug to a 2-pole receptacle as shown in Sketch B if a properly grounded outlet is not available. The temporary adapter should be used only until a properly grounded outlet can be installed by a qualified electrician. The green-colored rigid ear, lug, and the like, extending from the adapter must be connected to a permanent ground such as a properly grounded outlet box.

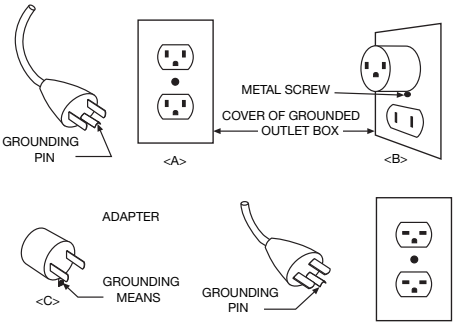


Figure 6:

WARNING:
Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:
• lead from lead-based paints,
• crystalline silica from bricks and cement and other masonry products, and
• arsenic and chromium from chemically-treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.
Use a vacuum cleaner for wood dust collection as described in our manual whenever possible.

Scope of supply:
1 pc. Miter saw KGS 80, fitted with TCT saw blade (24 teeth, also available as accessory 28 734)
1 pc. Longitudinal stop
1 pc. Allen key
1 pc. Instruction manual

4 General view (fig. 1)

1. Saw head
2. Saw blade cover
3. Locking lever
4. Saw blade
5. Device base
6. Clamping screw
7. Turntable
8. Spindle for clamping fixture
9. Limit stop
10. Clamping fixture
11. Scale
12. Fastening bores
13. Adjusting screw for saw head

5 Description of machine

Thank you for purchasing the PROXXON KGS 80 Miter Saw.

The saw is not only excellently suited for small yet fine applications for separating wood, non-ferrous metals and plastics, but also larger round and square materials can be easily cut in two no matter whether with a straight cut or with a precise and freely adjustable mitre.

The work piece is clamped in the integrated vice for sawing and separating. The centrically clamped jaws ensure that the imaginary centre

line of the vice opening – therefore the centre of the work piece - will always “hit“ the centre of the saw blade independent of the selected work piece width.
Clamping round materials is no problem. The prismatic groove ensures the safe and reliable clamping of round materials. For thin, yet relatively wide work pieces (up to 65 mm) there is another groove on the top of the clamping jaw.

The round table itself is swivel-mounted: An angle of plus/minus 45° produces all desired mitres and the scale on the right also enables exact and easy monitoring of the angle setting. The round table has serrations every 15°, but any and all “intermediate steps“ can be set and fixed with a clamping fixture. Cross-cutting work pieces by using the limit stop is also possible with this device.
The saw head is kept in its upper home position by spring tension. Important: For even greater flexibility, the saw head can also be laterally adjusted on the side using a knurled screw. This minimises the “free” length of the work piece outside the vice jaws, and for angle cuts this ensures that the saw blade does not collide with the vice jaws.

For saw head operation, i.e. to swivel the saw head down while working with the saw, the mechanical safety catch located on the saw head in its home position must be unlocked for your safety. To prevent accidental operation and therefore minimise the risk of injuries, the saw head is arrested in its upper position and can be unlocked with a small lever at the horizontal grip.
This also unlocks the mechanical safety catch for the swivelling saw blade protection: This folds itself up when the saw head is lowered to the work piece. The ergonomically placed on/off button can then be pressed easily and without risk.

6 Technical data

Dimensions and weights:

Device base:	approx. 9” x 9” (230 mm x 230 mm)
Device base height:	approx. 2” (50 mm)
Height:	approx. 8 7/16“ (215 mm) (in resting position of the separating head)
Width:	approx. 11 13/16“ (300 mm) (saw head at far right)
Jaw length of vice:	3 1/8” (80 mm)
Span width:	max. 1 6/8 “ (45 mm)
Weight:	approx. 6 kg
Ø saw blade:	3 1/8”; max 3 11/32” (80 mm; max. 85 mm)

Motor:

Voltage:	110-120 V 50/60 Hz
Power:	1.8 A
No-Load speed:	5400/min

7 Before beginning work

NOTE:
Safe and precise work is only then possible if the device has been properly fastened with screws to a worktop. There are drill holes in the heel plate for this purpose.

CAUTION!
When fixing or transporting the device, always disconnect the mains plug!

DANGER!
Never operate the Miter Saw without wearing protective goggles!
Never use the Miter Saw to cut materials other than wood, non-ferrous metals or plastics.
Only choose saw blades suitable for the material to be cut.

8 Working with the KGS 80 Miter Saw

8.1 Cutting capacity

Work can begin after the device has been fixed to a stable base. Additional preparations are not necessary and the work piece to be separated can be clamped into the vice and cut in two. Please note the following maximum sizes in dependence on the sawing angle:

How to read the table:
If, for example, you would like to cut a 1 3/16” inch squared timber in two at a 45° angle, it may only have a maximum depth of 3/8” inch. Please note that these are only standard values.

Cutting capacity at 90° (right-angled cut):			Cutting capacity at 45° (mitre cut):		
For material thicknesses up to (inch)	Maximum material width (inch)	Round material: (inch)	For material thicknesses up to (inch)	Maximum material width (inch)	Round material: (inch)
3/8”	2 9/16”		3/16”	1 13/32”	
11/16”	2”		3/8”	1 3/16”	
13/16”	1 9/16”		9/16”	1”	
1”	1”	Ø 1”	3/4”	11/16”	Ø 3/4”

8.2 Sawing

8.2.1 General notes on setting the saw head

To achieve the shortest possible clamping length of the clamped work piece, the position of the saw head can be adjusted by using the knurled screw 11 (fig. 2a/b). This enables the saw blade to be guided as close to the clamping fixture as possible. Cuts will then be especially clean and precise if there is only a small gap between the restraint and the saw blade level.
Before every use, make certain that the saw head is not set so that the saw blade will collide with the jaws of the clamping fixture when swivelling the saw head down (e.g. by shutting down the saw head when machine is off. Caution: disconnect the mains plug here)! Risk of injury!

CAUTION!
Do not remove any cutting scraps or other work piece parts from the cutting area as long as the machine is running and the saw blade is not in its home position.

8.2.2 Straight and mitre cuts

8.2.2.1 If you would like to produce straight cuts (see fig. 2a)

1. Make sure that turntable 1 (see fig. 2a) is in the 0° position: Arrow marking 2 must point to the 0° marking on scale 3 in the device base. If not, then please set as follows: (Caution: Please make sure that knurled screw 13 is released!)
2. Release stop lever 4 by lifting it and guide turntable 1 to the corresponding position. Let go of stop lever 4.

Caution! The turntable will lock in place at 0°. If necessary, move turntable back and forth a bit with released stop lever until the stop lever catches.

3. Insert work piece 5 in clamping fixture 6, align and tighten. Pay attention to the desired length of the „free“ end!
4. For perfect alignment, saw head 7 of the switched off (!) device after locking lever 8 has been unlocked (pull to the front) can be swivelled down so far that saw blade 9 at the automatic swivelled-away saw blade protection 10 just barely touches the work piece (see also fig. 3). This enables a better estimation of the future length of the work piece.
5. For exact adjustment, saw head 7 can be finely toggled by using knurled screw 11.

DANGER! WARNING!
Please make sure here that the saw blade will never collide with the jaws of clamping fixture 6!

Please note:
Crosscutting with the supplied length stop is no problem! How this works is described in “Working with the Length Stop”.

6. (See fig. 3). After locking lever 8 has been released and the on/off button 12 has been pressed, swivel saw head 7 down and cut the work piece into two as shown in Fig. 3. The saw blade protection swivels up.

8.2.2.2 If you would like to produce mitre cuts: (See fig. 2b):

1. Release knurled screw 13 and lift up stop lever 4. Now set turntable 1 to the desired angle. Please use scale 3 and orient yourself using arrow marking 2 on turntable 1. The 15° graduations are provided with ser-

rations, and stop lever 4 must be released so that they can become effective. Intermediate settings can also be set and fixed using knurled screw 13.
2. Insert work piece 5 in clamping fixture 6, align and tighten. Pay attention to the desired length of the „free“ end here as well!
3. For perfect alignment, saw head 7 of the switched off (!) device after locking lever 8 has been unlocked (pull to the front) can be swivelled down so far that saw blade 9 at the automatic swivelled-away saw blade protection 10 just barely touches the work piece (see also fig. 3). This enables a better estimation of the future length of the work piece. For exact adjustment, the saw head can be finely toggled by using knurled screw 11.

DANGER! WARNING!
Please make sure that the saw blade will never collide with the jaws of clamping fixture 6!

Please note:
Crosscutting with the supplied length stop is no problem! How this works is described in “Working with the Length Stop”.

4. After block lever 8 has been released and the on/off button 12 has been pressed, swivel saw head 7 down and cut the work piece in two as shown in fig. 3. The saw blade protection swivels up.

NOTE!
The rotational speed, and not the contact pressure, generates the high cutting performance! Never work with force! This places an unnecessary load on the machine mechanics and leads to bad results and increased wear!

8.2.3 Working with the Length Stop (see fig. 4)

The KGS 80 Miter Saw is supplied with an adjustable length stop 1. Any number of work pieces of equal length can be cut off. Work piece 2 to be cut off is inserted in clamping fixture 3, pushed up to the limit plate 4 and then clamped. After the work piece has been cut off and the vice has been loosened, the material is pushed up to the limit stop again, clamped with the vice and then cut off. This can be repeated any number of times.

This is how to set the limit stop:

1. Allen screw 5 is released using an Allen key (included in delivery). Limit stop 1 can then be pushed in guide 6 up to the desired length. Make sure that limit plate 4 is properly aligned and that it hits the work piece correctly when “limit stopped”!

2. Clamp limit stop 1 with Allen screw 5.

If the limit stop is not required, it can be completely removed after releasing screw 5.
The desired position of the limit stop can be determined, for example, by appropriately marking a work piece, clamping it so that the saw blade hits the marking exactly and then by aligning the limit stop accordingly. This enables the exact reproduction length for the desired number of the subsequent work pieces.

CAUTION!
After the work piece has been aligned and clamped, fold limit plate 4 away during work (see fig. 4) to prevent the separated work pieces from jamming!

9 Accessories

Replace damaged or worn saw blades immediately. They represent a safety risk and worsen the work result.
Please use PROXXON accessories. NOTE: The use of improper accessories may cause hazards.
Actually we provide:

Super cut
(NO 28 731) 80 teeth, 3 $^{11}/_{32}$“ (85 mm) diameter x $^{1}/_{64}$“ x $^{13}/_{32}$“ bore (0.5 x 10 mm). Used on hard and soft woods or plastics.

Tungsten carbide tipped (TCT)
(NO 28 732) 36 teeth, 3 $^{1}/_{8}$“ (80 mm) diameter x $^{1}/_{16}$“ x $^{13}/_{32}$“ bore (1.6 x 10 mm). Used on balsa, ply, soft woods, plastics, aluminum, Polycarbonate and GFK.

Tungsten carbide tipped (TCT)
(NO 28 734) 24 teeth, 3 $^{1}/_{8}$“ (80 mm) diameter x $^{1}/_{16}$“ x $^{13}/_{32}$“ bore (1.6 x 10 mm). Used on aluminum, hard wood, laminates or plastics.

Diamond coated
(NO 28 735) 3 $^{11}/_{32}$“ (85 mm) diameter x $^{1}/_{64}$“ x $^{13}/_{32}$“ bore (0.5 x 10 mm). Used on circuit boards or glassfiber reinforced plastics (GRP).

Synthetic resin bonded cut-off wheel
(NO 28 729) 3 $^{1}/_{8}$“ (80 mm) diameter x $^{1}/_{16}$“ x $^{3}/_{8}$“, bore (1.6 x 10 mm). For cutting wood, steel, non-ferrous metals and plastics.

10 Care and Maintenance

10.1 Replacing the saw blade (see fig. 5a and 5b):

If the saw blade is worn or you wish to use another type or a cutting disc, you can quickly and easily exchange them.

Please note:
Replacement saw blades and a corundum cutting disc for the machine can be obtained on the market. Also observe the "Accessories" section of this manual.

Please see our device catalogue or consult your nearest dealer!

CAUTION!
Disconnect the mains plug for all care and maintenance works!

1. Unscrew Allen screw 1 in saw blade protection 2 and fold saw blade protection up as shown in fig. 5a.
2. Using an Allen key, unscrew screw 4 in the centre of saw blade 3 (see fig. 5b). Hold the shaft at the flat spot with an open-ended spanner, Attention: Left-handed-thread!
3. Remove old saw blade. Mind flat washer 5 here.
4. Attach new saw blade and tighten with flat washer 5 and screw 4.

CAUTION!
Pay close attention to the running direction of the saw blade. When viewed from the front side of the saw, the teeth must point downwards!

Be careful when using the corundum cutting disc (accessories, item no.: 28 729):
The corundum cutting disc is very sensitive to bending. Do not touch the disc when releasing or tightening the fastening screw. The disc breaks very easily.

5. Fold down saw blade protection 2 once more and tighten using Allen screw 1.

CAUTION!
Disconnect the mains plug for all care and maintenance works!

10.2 Cleaning

CAUTION!
Always disconnect the mains plug before doing any cleaning, setting, maintenance or repair works!

NOTE:
The machine is mostly maintenance free. For a long service life, the device should be cleaned after every use with a soft cloth, hand brush or a soft brush. Even a vacuum cleaner can be recommended. Ensure all ventilation slots are free from obstruction.

External cleaning of the housing can be carried out using a soft, possibly moist cloth. While doing so, a mild detergent or other suitable cleansing agent can be used.

WARNING!
To avoid fire or toxic reaction, never use gasoline, naphtha, acetone, lacquer thinner, or similar highly volatile solvents to clean the scroll saw.

Do not allow brake fluids, gasoline, or penetrating oils to come in contact with the plastic parts. They contain chemicals that can damage or destroy plastics!

Also some of these products have low flash points and could explode if used to clean the saw.

NEVER smoke while using solvents: Smoking near solvents could ignite an explosion or fire and cause serious injury.

ALWAYS WORK in a well ventilated area to prevent the accumulation of dangerous fumes, continuesly supply the work area with a constant source of fresh air:

Lack of ventilation while using solvents could cause serious personal health risks, fire, or environmental hazards.

When servicing use only PROXXON replacement parts.

Use of any other parts may create a hazard or cause product damage.

Any attempt to repair or replace electrical parts on this tool may create a hazard unless repair is done by a qualified service technician.

Repair service is available at your PROXXON service center (You find the address at address at the back of this manual).

Spare parts list for Miter Saw KGS 80, Article No. 37160

Please order spare parts in writing from

PROXXON Central Service (Address on back of instruction manual)

Part No.:	Designation
37160 - 1	Power cable
37160 - 2	Motor
27160 - 3	Saw-blade
27160 - 4	Miter bar
27160 - 5	Base
27160 - 6	Anchor plate
27160 - 7	Vise
27160 - 8	Support
27160 - 9	Table
27160 - 10	Clamp handle
27160 - 11	Retaining clip
27160 - 12	Tension handle
27160 - 13	Locating bar
27160 - 14	Plate
27160 - 15	Support
27160 - 16	Vise
27160 - 17	Spring
27160 - 18	Screw
27160 - 19	Screw
27160 - 20	Screw
27160 - 21	Nut chuck
27160 - 22	Nut
27160 - 23	Nut
27160 - 24	Screw
27160 - 25	Washer
27160 - 26	Circlips
27160 - 27	Screw
27160 - 28	Screw
27160 - 29	Screw
27160 - 30	Handle
27160 - 31	Screw

Part No.:	Designation
27160 - 32	Circlips
27160 - 33	Cover
27160 - 34	Guard-cord
27160 - 35	Motor cover
27160 - 36	Pulley
27160 - 37	Spacer
27160 - 38	Arbor collar
27160 - 39	Bracin plate
27160 - 40	Cutter shaft
27160 - 41	Arm
27160 - 42	Motor pulley
27160 - 43	Extension spring
37160 - 44	Saw-blade guard
27160 - 45	Shaft-pivot
27160 - 46	Switch handle
37160 - 47	Switch
27160 - 48	Handle cover
27160 - 49	Screw
27160 - 50	Screw
27160 - 51	Nut
27160 - 52	Screw
27160 - 53	Washer
27160 - 54	Screw
27160 - 55	Screw
27160 - 56	Circlips
27160 - 57	Button switch
27160 - 58	Screw
37160 - 59	Controller
27160 - 60	Drive belt
27160 - 61	Compression spring
27160 - 62	Ball bearing

Part No.:	Designation
27160 - 63	Wave washer
27160 - 64	Screw
27160 - 65	Screw
27160 - 66	Washer
27160 - 66	Washer
27160 - 67	Screw
27160 - 68	Clamp cord
27160 - 69	Screw
27160 - 70	Screw
27160 - 71	Screw
27160 - 72	Circlips
27160 - 73	Screw
27160 - 74	Pivot down switch
27160 - 75	Shaft pivot
27160 - 76	Ferrite
27160 - 77	Retaining clip
27160 - 78	Rivet
27160 - 79	Lever
27160 - 80	Rubber pad
27160 - 81	Spacer
27160 - 82	Tilting scale
27160 - 83	O-Ring
27160 - 86	Screw
27160 - 87	Lock washer
37160 - 88	Terminal
37160 - 93	Label
27160 - 94	Trade mark label
37160 - 95	Caution label
37160 - 99	Manual

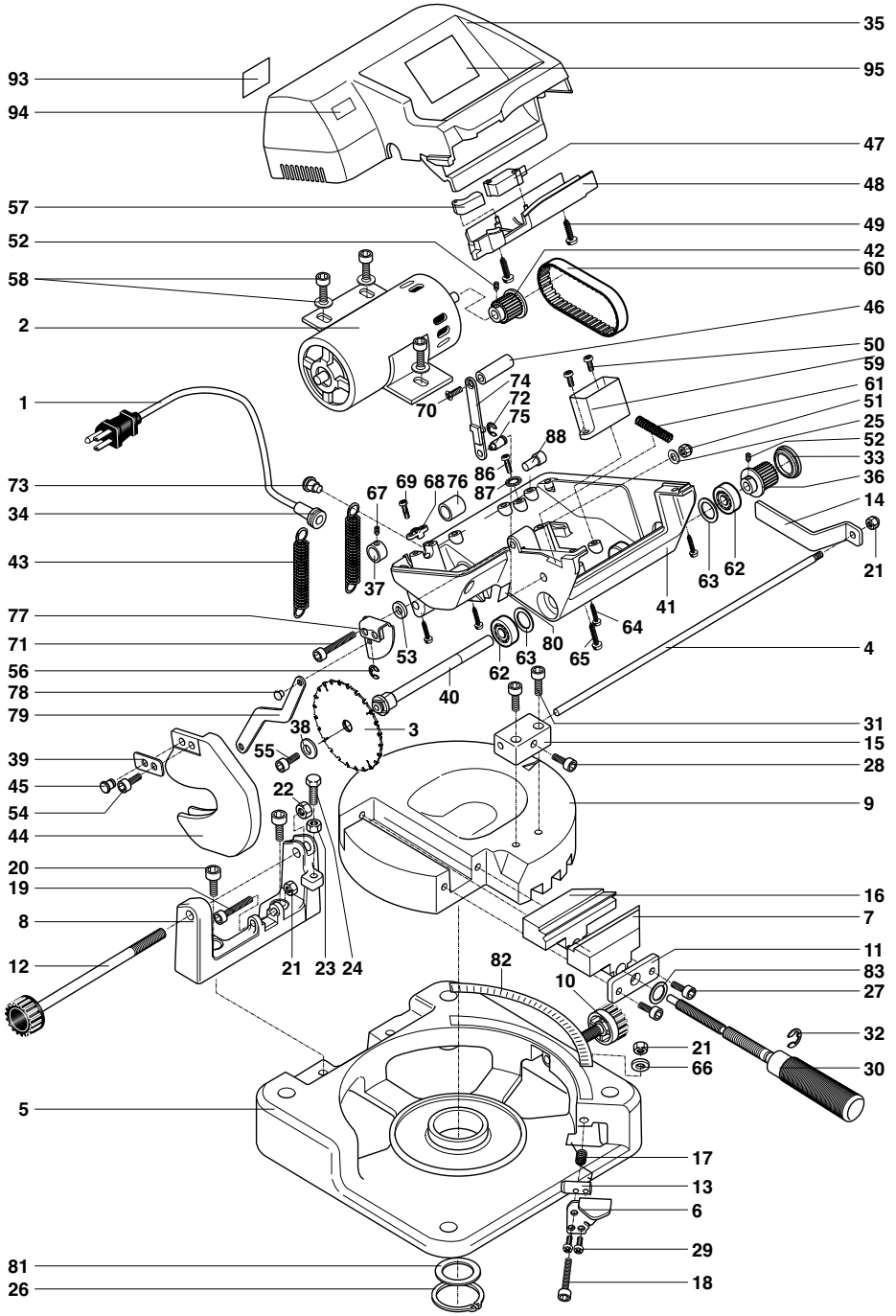
LIMITED WARRANTY OF PROXXON POWER TOOLS FOR HOME USE

Prox-Tech, Inc., (“Seller”) warrants to the original purchaser only, that all PROXXON consumer power tools will be free from defects in material or workmanship for a period of two years from the date of purchase. Seller’s sole obligation and your exclusive remedy under this limited warranty and, to the extent permitted by law, any warranty or condition implied by law, shall be the repair or replacement of parts, without charge, which are defective in material or workmanship and which have not been misused, carelessly handled, or misrepaired by persons other than Seller or Authorized Service Station. In the event of a failure of a product to conform to this written warranty, please refer to the Service and Repair section on the back of this manual and take action accordingly.

This Limited Warranty does not apply to accessory items such as circular saw blades, drill bits, router bits, jigsaw blades, sanding belts, grinding wheels and other related items. Damage to the product resulting from tampering, accident, abuse, negligence, unauthorized repairs or alterations, unapproved attachments or other causes unrelated to problems with material or workmanship are not covered by this warranty.

Any implied warranties shall be limited in duration to two years from date of purchase. Some states in the U.S. and some Canadian provinces do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

In no event shall seller be liable for any incidental or consequential damages (including but not limited to liability for loss of profits) arising from the sale or use of this product. Some states in the U.S. and some Canadian provinces do not allow the exclusion or limitation of incidental or consequential damages; so the above limitation or exclusion may not apply to you. This limited warranty gives you specific legal rights, and you may also have other rights, which vary from state to state in the U.S., province to province in Canada and from country to country. This limited warranty applies only to PROXXON power tools sold within the United States of America, Canada, the commonwealth of Puerto Rico and Mexico. For warranty coverage within other countries contact your local PROXXON Importer.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PROXXON

SERVICE AND REPAIR

Your device does not work properly? Please read the operating instructions again carefully. If the unit is in fact defective, please send it to:

Prox-Tech, Inc.
Attn.: PROXXON Service Center
2555 Tate Blvd. S.E.
PO Box 1909
Hickory, NC 28603-1909

Please make sure, that your tool is **carefully packaged** and include a copy of your **dated proof of purchase**. You will help us to react even quicker, if you describe the problem in short and please **don't forget to include your name, address and daytime telephone number**. We will respond in a prompt and reliable manner.

Spare Parts

You can also order any necessary **spare parts** from our Service Center at the above address. Please check the **article-number** of the tool concerned on the nameplate of the tool and define the part needed by using the **explosion drawing** in the manual that came with the tool. **Every part has a specific number** (5 digit-XX). Please provide us with this number when ordering.

For any further information call us toll free at **1-877-PROXXON** (1-877-776 9966) or visit us on the web at www.proxxon.com/us.

Made in China
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Art.-Nr. 37160-99